WHAT IS CLAIMED IS:

1. A device for amplifying and detecting a target nucleic acid, comprising:

a solid support having a surface;

at least one species of oligonucleotide immobilized substantially uniformly over said surface, thereby defining a field of immobilized oligonucleotides, said at least one species of oligonucleotide being complementary to a first strand of said target nucleic acid; and

a plurality of hybridization probes immobilized to the solid support at discrete positions within said field of immobilized oligonucleotides.

2. The device of Claim 1, wherein said surface comprises a material selected from the group consisting of glass and plastic.

3. The device of Claim 2, wherein said at least one species of oligonucleotide immobilized uniformly over said surface is immobilized covalently.

4. The device of Claim 2, wherein said plurality of hybridization probes immobilized to the solid support are immobilized covalently.

5. The device of Claim 2, wherein said at least one species of oligonucleotide and said plurality of hybridization probes are immobilized covalently.

6. The device of Claim 5, further comprising at least one soluble oligonucleotide complementary to an opposite strand of said target nucleic acid, said first strand and said opposite strand of said target nucleic acid being complementary to each other.

7. The device of Claim 1, wherein said plurality of hybridization probes comprises a plurality of self-reporting probes.

8. The device of Claim 7, wherein each of said plurality of self-reporting probes comprises a fluorophore moiety.

9. The device of Claim 6, wherein said at least one species of oligonucleotide immobilized uniformly over said surface comprises a promoter sequence for an RNA polymerase.

10. A method of making a device for amplifying and detecting a target nucleic acid, comprising the steps of:

obtaining a solid support having a surface;

immobilizing to said surface at discrete positions thereon at least two different hybridization probes to produce a probe array; and

contacting said probe array with a composition comprising an oligonucleotide complementary to a first strand of said target nucleic acid, whereby said oligonucleotide immobilizes to said surface substantially uniformly.

11. The method of Claim 10, wherein the immobilizing step comprises spotting with a mechanical arrayer.

12. The method of Claim 11, wherein the contacting step comprises dispensing with a mechanical pipettor a liquid volume of said composition sufficient to immerse said probe array.

13. The method of Claim 10, wherein the surface comprises glass or plastic.

14. The method of Claim 13, wherein the solid support comprises a multiwell plate, and wherein the surface is a planar inner surface of a single well contained in said multiwell plate.

15. The method of Claim 13, wherein said hybridization probes and said oligonucleotide primer are each immobilized to said surface by a covalent bond.

16. The method of Claim 15, wherein the covalent bond is an amide bond.

17. The method of Claim 15, wherein said hybridization probes comprise a fluorophore moiety and a quencher moiety.

18. The method of Claim 17, wherein said hybridization probes are molecular beacons.

19. A kit for detecting a target nucleic acid, comprising:

a device in accordance with Claim 1;

a soluble oligonucleotide primer; and

a positive-control nucleic acid amplifiable in a nucleic acid amplification reaction using said at least one species of oligonucleotide primer immobilized uniformly over said surface in combination with said soluble oligonucleotide primer.

20. A method of detecting a target nucleic acid, comprising the steps of:

obtaining a device in accordance with Claim 1;

contacting said field of immobilized oligonucleotide primers and said plurality of different hybridization probes of said device with a sample containing,

said target,

a soluble oligonucleotide primer, and

at least one enzyme having a DNA polymerase activity

under amplification promoting conditions for a time sufficient to allow synthesis of amplicons; and

detecting a signal indicative of hybrid duplex formation from at least one of said plurality of different hybridization probes, thereby detecting the target nucleic acid.

21. A method of chemically bonding a biomolecule to a solid support, comprising the steps of:

(a) providing a solid support that comprises a plurality of nucleophilic moieties selected from the group consisting of hydroxyl moieties and sulfhydryl moieties;

(b) providing a carboxylated biomolecule; and

(c) contacting said carboxylated biomolecule and said solid support under reaction conditions sufficient to promote bonding between said solid support and said biomolecule.

22. The method of Claim 21, wherein said contacting step comprises contacting said carboxylated biomolecule and said solid support in the presence of EDAC.

23. The method of Claim 22, wherein said solid support comprises a glass surface.

24. The method of Claim 23, wherein said plurality of nucleophilic moieties comprises a plurality of sulfhydryl moieties.

25. The method of Claim 24, wherein said reaction-promoting conditions

comprise aqueous conditions buffered to a pH of from 5-9.

26. The method of Claim 23, wherein said reaction-promoting conditions comprise an EDAC concentration of between 50 and 200 mM.

27. The method of Claim 21, wherein said carboxylated biomolecule in step (b) comprises a fluorophore moiety.

28. The method of Claim 21, wherein said carboxylated biomolecule is selected from the group consisting of a carboxylated oligonucleotide, a carboxylated carbohydrate, a carboxylated peptide and a carboxylated protein.

29. The method of Claim 28, wherein said carboxylated biomolecule is a carboxylated oligonucleotide.

30. The method of Claim 29, wherein said carboxylated oligonucleotide comprises a fluorophore moiety.

31. The method of Claim 30, wherein said carboxylated oligonucleotide that comprises a fluorophore moiety further comprises a quencher moiety.